

Amendments to the Claims:

1. (currently amended) A method for diagnosing dysplasia, pre-cancer or cancer in situ in biological tissue or cells of a living organism, comprising:

- a) applying to the tissue or cells in situ a dye selected from the group consisting of methylene blue and toluidine blue O;
- b) removing excess dye from the tissue or cells;
- c) generating a reflected light spectrum from the tissues or cells by illuminating the stained tissue or cells with light;
- d) directing the reflected light spectrum to a spectrometer;
- e) comparing the degree of the metachromatic shift of the dye from the reflected light spectrum of the stained tissue or cells with the degree of the metachromatic shift of the dye from a library of previously obtained spectra of similarly stained tissue or cells; and
- f) correlating the reflected light spectrum with a disease state, said disease state selected from the group consisting of dysplasia, pre-cancer and cancer, whereby an in situ diagnosis of dysplasia, pre-cancer or cancer is made.

2-4 (canceled)

5. (previously presented) A method as in claim 1, wherein said comparing comprises the use of a digital microprocessor.

6. (canceled)

7. (previously presented) A method as in claim 1, wherein the tissues or cells are thought to be metaplastic.

8. (previously presented) A method as in claim 1, wherein the spectrometer is able to measure light for a range of or some part of a range of wavelength from 200 to 1100 nanometers.

9. (previously presented) A method as in claim 1, wherein the reflected light spectrum is measured and recorded, and said measuring comprises the use of a photometer and one or more light filters.

10. (currently amended) A method as in claim 1, wherein the tissue or cells are from at least one organ selected from the group consisting of skin, cervix, vagina, mouth, colon, and esophagus ~~and internal organs~~.

11. (previously presented) A method as in claim 1, wherein, prior to said comparing step a reflected light spectrum from unstained tissue or cells is subtracted from the spectrum of the stained tissue or cells.

12-19 (canceled)

20. (new) A method as in claim 1, wherein the tissue or cells are from an internal organ.